

Product Information

# INFINAM® PA 6004 P

## POLYAMIDE-12 POWDER FOR ADDITIVE MANUFACTURING PROCESSES

**INFINAM® PA 6004 P** is a natural colored fine powder especially for the use in additive manufacturing. Our product is suitable for manufacturing of functional prototypes, manufacturing of individual units as well as serial parts. INFINAM® PA 6004 P is especially suitable for powder bed fusion technologies.

### Features

- Powder for flame retardant 3D print parts
- Exploitable on common systems for powder-based additive manufacturing
- Easy-to-process
- High process stability
- Excellent powder flow properties
- Excellent mechanical properties
- Excellent surface resolution and feature detail
- Nice surface finish
- Good resistance against numerous chemicals

The features and properties presented are to be understood as typical and are intended for reference and comparison purposes only. Due to layer-wise construction and by variation of processing conditions the actual properties of components from additive processes will vary. Due to process-related deviations the user is responsible to ensure the characteristic values required for the respective use and to carry out additional application-related tests if necessary.

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT [EVONIK-HP@EVONIK.COM](mailto:EVONIK-HP@EVONIK.COM)  
OR VISIT OUR PRODUCT AT [WWW.INFINAM.COM](http://WWW.INFINAM.COM)

### Properties of 3D printed parts acc. ISO

	dry / cond	Unit	Test Standard
Tensile modulus flat X	2500 / -	MPa	ISO 527
Tensile modulus on-edge Y	2500 / -	MPa	ISO 527
Tensile modulus upright Z	2300 / -	MPa	ISO 527
Tensile strength flat X	47 / -	MPa	ISO 527
Tensile strength on-edge Y	47 / -	MPa	ISO 527
Tensile strength upright Z	42 / -	MPa	ISO 527

Nominal strain at break flat X, tB	4 / -	%	ISO 527
Nominal strain at break on-edge Y, tB	4 / -	%	ISO 527
Nominal strain at break upright Z, tB	4 / -	%	ISO 527

Thermal properties	dry / cond	Unit	Test Standard
Melting temp., DSC 1st heating, powder	187 / *	°C	ISO 11357

Burning Behav.	dry / cond	Unit	Test Standard
UL Blue Card available	<a href="#">yes</a> / *	-	-
Burning behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	-

Powder properties	Value	Unit	Test Standard
Bulk density, powder	520	g/l	EN ISO 60
Particle size, D(50)	55	µm	ISO 13320, DIN ISO 8130-13

Sustainability	Value	Unit	Test Standard
LCA name of certificate	<a href="#">INFINAM® PA 6004 P</a>		ISO 14040, 14044
LCA certifier	<a href="#">TÜV Rheinland</a>	-	ISO 14040, 14044
Blue water consumption	22.3	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	4.9	kg CO <sub>2</sub> eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	4.9	kg CO <sub>2</sub> eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	0.1	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-3.1	kg CO <sub>2</sub> eq./kg	ISO 14040, 14044

## Characteristics

### Key Features, Industrial Sector

Sustainable, Industry and Engineering, 3D Printing

### Key Features, Additives

Flame retardant

#### Key Features, Sustainability

RFP (reduced foot print)

#### Key Features, Processing

3D Printing

#### Key Features, Delivery form

Powder

#### Processing

Additive manufacturing, Powder bed fusion

#### Special Characteristics

Halogen-free, Semi-crystalline

#### Additives

Flame retardant

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